

### Imaging Unit

#### Field of invention

The invention relates to an imaging unit in a printing press.

#### Background of invention

5 A printing press with a printing unit having a seamless image cylinder, which is coated with a dryable polymer by a direct image creation process in the printing unit is known from ~~DE~~German patent No. 19612927 Al.

The surface characteristic of the ~~dryable~~ polymer on the image cylinder is converted completely ~~converted or only~~ in certain areas by a selective laser exposure after drying ~~in order to changes its affinity for~~ to a printing ink. The image cylinder is used instead of the plate cylinder ~~In~~ a conventional printing press either in wet offset printing or in dry-offset printing ~~the image cylinder is used instead of the plate cylinder~~. The image cylinder is cleaned of the image carrying layer after the printing. This layer must not be ~~totally removed totally~~.

The laser source, the coating unit and the drying unit are mounted side by side on a spindle drive. They are moved according to the ~~spindle-rotation~~ of the ~~spindle~~ over the width of the cylindrical imaging surface. The cleaning unit is ~~allocated~~ separately ~~allocated~~.

5 The lacking of complexity of the apparatus and necessary unproductive time during reversing of the spindle drive ~~is represent~~ disadvantageous.

#### Summary description of invention

Task It is an object of the invention is to provide a compact imaging unit

10 with a short operating time.

The task That object is solved according to the present invention by allocating the coating unit, the image creation unit and the developing unit together one below the other in a traversing imaging unit.

#### Brief description of the drawing

The invention is described below in greater detail by an embodiment— thereof and by reference to the drawing, wherein the sole Figure 1 shows the imaging unit.

### Detailed description

Figure Fig. 1 shows a printing form cylinder 1 with an imaging unit 2. The imaging unit 2 contains a cleaning unit 3, preferably using laser but possibly also working with an abrasive, a coating unit 4 located below the cleaning unit 3, an image creationcreating unit 5 located below the coating unit 4, and a developing unit 6 located below the image creationcreating unit 5.

The operation of the four afore mentionedaforementioned units is known and is therefore described only briefly. The image layer of the preceding printing job is removed from the printing form cylinder 1 by the cleaning unit 3. The 10 coating unit 4 applies a new layer for taking the image to the printing form cylinder 1 by spraying or splashing. The image creationcreating unit 5 is creating the image on this applied layer and with it creating the printing form for the new printing job.

The coating unit 4 and the image creation unit 5 are combined in a 15 combination unit, which operates in this case on the ink jet principle.

The image creationcreating unit 6 re-works the image carrying layer for instance by hardening and/or cleansing, etc.

The image unit 2 is mounted on a ~~not shown~~ spindle carriage (not shown) and traverses over the width of the printing form cylinder 1 in the direction of the arrow.

The combined allocation of the cleaning unit 3, the coating unit 4, the  
5 image ~~creation~~creating unit 5 and the developing unit 6 in the imaging unit 2 permits an overlapping of the operating times of the different units. No reverse movement without active operation to the other side of the printing form cylinder is necessary.